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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,152	10/31/2003	Flabio Cavalheiro		1479

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08/21/2007

EXAMINER
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KARLS, SHAY LYNN

ART UNIT	PAPER NUMBER
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1744

MAIL DATE	DELIVERY MODE
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08/21/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/699,152	<b>Applicant(s)</b> CAVALHEIRO, FLABIO	
	<b>Examiner</b> Shay L. Karls	<b>Art Unit</b> 1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/23/04; 1/6/06 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/23/07 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (USPN 4455705) in view of Nortman et al. (USPN 6276032).

Graham teaches a cleaning device comprising a cleaning member (figure 1, element 15) with a first surface having a scouring surface of loop material (figure 1, element 17) (claims 1, 7 and 8) and a second surface comprising a sponge (figure 1, element 16) (claim 10). There is a base plate (figure 1, element 10) having a plurality of projections (figure 1, element 20) arranged in rows and columns for gripping the first surface of the cleaning member (claims 1, 6). The projections each have a top segment having opposing ends (figure 6, element 21) and an intermediate section separating the top segment from the base plate by a predefined distance

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(claim 1). The opposing ends of the projections each have free ends, which terminate at substantially a point, and therefore the opposing ends have a cross section that is thicker at the connection of said ends to the top segment than at said free ends (figure 7) (claims 2, 3, 4). The intermediate section having bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the cross section is thicker at the bottom end than at the top end (figures 6 and 7) (claim 3). The distance between the end of each free end is *substantially* the same as the distance between the top end and the bottom end of the intermediate segment (figure 7) (claim 5). The base plate comprises an ergonomic, contoured handle member (figure 1, element 25) (claim 1) including a grasping means that is curved throughout and configured to closely conform to the curvature of the inside of a user's hand (claim 1) and the grasping means is removable from the base plate (figure 5) (claim 12). The handle further includes a bottom surface (portion of 30 that is located closest to the base plate) and an outermost circumference (widest portion of handle). There is a column (26) for connecting the base plate to the handle. The column has a diameter and an outer surface. The handle has a channel formed between a bottom surface of the handle, the outermost circumference of the handle, the column and the base plate. The channel is configured in such a manner as to accept at least part of a user's finger when the handle is grasped (see figure below) (claim 1). The column is capable of being disengaged for removing the handle from the base plate (figure 5 shows it disengaged) (claim 1).

Graham teaches all the essential elements of the claimed invention however fails to teach that the projection is T-shaped with the top segment having a substantially straight upper surface (claim 1). Graham also fails to teach that the channel has a depth defined by the outermost

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circumference of the handle and the midpoint of outer edge of the column, the depth being at least equal to the diameter of the midpoint of the column (claim 1).

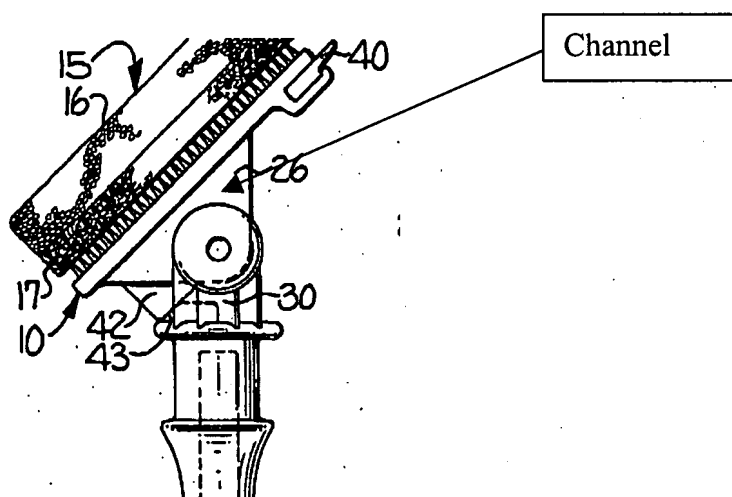
Nortman teaches fastening hooks having a T-shaped projection each with a top segment that is substantially straight (figure 5, element 60). The projections have a lower surface and opposing ends (figure 5, element 77) and an intermediate section (figure 5, element 58) separating the top segment from the base plate by a predefined distance. The opposing ends of the projections each have free ends, which terminate at *substantially* a point (figure 5), and therefore the opposing ends have a cross section that is thicker at the connection of said ends to the top segment than at said free ends (figure 5). The intermediate section having bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the cross section is thicker at the bottom end than at the top end (figure 5). The distance between the end of each free end is *substantially* the same as the distance between the top end and the bottom end of the intermediate segment (figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Graham with the hooks as taught by Nortman since the hooks of Nortman can exhibit substantially equal fastening properties in substantially all directions that are parallel to a plane that is generally established by the substrate layer of the fastener component (col. 21, lines 51-55). Also, the fasteners of Nortman have increased loop-engaging and loop-retaining characteristics which leads to greater resistance to premature pop-opens (col. 6, lines 54-58). Additionally, the hooks as taught by Graham and the hooks as taught by Nortman are equivalent structures known in the art, which perform the same function of securing two substrates together.

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Therefore, because these two fastening means were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the hooks of Nortman for the hooks of Graham.

Additionally, regarding the depth of the channel, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to make the depth of the channel at least equal to the diameter of the midpoint of a column because Applicant has not disclosed that depth of the channel provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a channel having a depth as taught by Graham or the claimed depth because both depths perform the same function of allowing a user to grasp the handle equally well. Therefore, it would have been obvious to one of ordinary skill in the art to modify Graham to obtain the invention as specified in claim 1.



Claims 1-8, 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hintz (USPN 6493899) in view of Nortman et al. (USPN 6276032).

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Hintz teaches a cleaning device comprising a cleaning member (figure 3, element 32) with a first surface having scouring surface of loops (figure 3, element 33) (claims 1, 7, 8) and a second surface comprising a sponge (figure 3, element 32) (claim 10). There is a base plate (figure 3, element 14) having a plurality of projections (figure 3, element 34) arranged in rows and columns for gripping the first surface of the cleaning member (row and columns can be formed from any formation of projections—not limited to linear) (claims 1, 6). The projections each have a top segment having opposing ends and an intermediate section separating the top segment from the base plate by a predefined distance (common hook and loop material is used; col. 3, lines 37-42) (claim 1). The base plate comprises an ergonomic, contoured handle member (figure 2, element 40) (claim 1) including a grasping means that is curved throughout and configured to closely conform to the curvature of the inside of a user's hand (claim 1) and the grasping means is removable from the base plate (figure 2, element 46) (claim 12). The handle further includes a bottom surface (portion of 48 with finger ridges) and an outermost circumference (distance around the handle longitudinally). There is a column (40) for connecting the base plate to the handle. The column has a diameter and an outer surface. The handle has a channel formed between a bottom surface of the handle, the outermost circumference of the handle, the column and the base plate. The channel is configured in such a manner as to accept at least part of a user's finger when the handle is grasped (see figure below) (claim 1). The column is capable of being disengaged for removing the handle from the base plate (figure 2) (claim 1).

Hintz teaches all the essential elements of the claimed invention however fails to teach that exact details of the projections. The reference does not teach that the projection is T-shaped

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with the top segment having a substantially straight upper surface (claim 1) and the opposing ends of the projections have a free end, and the opposing ends have a cross section that is thicker at the connection of the ends to the top segment than at the free ends (claim 2). Additionally, Hintz fails to teach that the intermediate section of projections have a bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the intermediate section has a cross section that is thicker at the bottom end than at a top end (claim 3). Hintz also fails to teach the opposing ends terminate at substantially a point (claim 4) and that the distance between the top end and the bottom end of the intermediate segment are substantially the same (claim 5). Additionally, Hintz also fails to teach that the channel has a depth defined by the outermost circumference of the handle and the midpoint of outer edge of the column, the depth being at least equal to the diameter of the midpoint of the column (claim 1).

Nortman teaches fastening hooks having a T-shaped projection each with a top segment that is substantially straight (figure 5, element 60). The projections have a lower surface and opposing ends (figure 5, element 77) and an intermediate section (figure 5, element 58) separating the top segment from the base plate by a predefined distance. The opposing ends of the projections each have free ends, which terminate at *substantially* a point (figure 5), and therefore the opposing ends have a cross section that is thicker at the connection of said ends to the top segment than at said free ends (figure 5). The intermediate section having bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the cross section is thicker at the bottom end than at the top end (figure 5). The distance between the end of each free end



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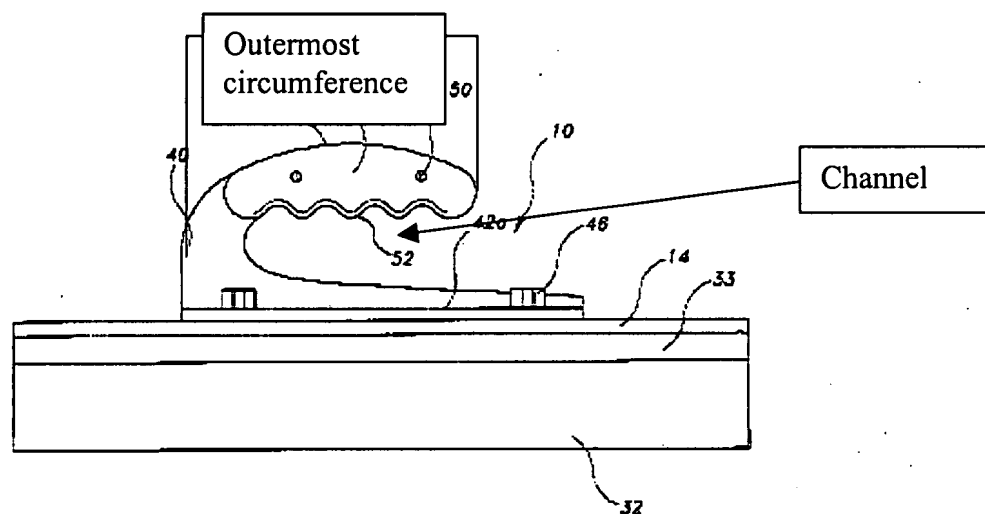
is *substantially* the same as the distance between the top end and the bottom end of the intermediate segment (figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hintz with the hooks as taught by Nortman since the hooks of Nortman can exhibit substantially equal fastening properties in substantially all directions that are parallel to a plane that is generally established by the substrate layer of the fastener component (col. 21, lines 51-55). Also, the fasteners of Nortman have increased loop-engaging and loop-retaining characteristics which leads to greater resistance to premature pop-opens (col. 6, lines 54-58). Additionally, the hooks as taught by Hintz and the hooks as taught by Nortman are equivalent structures known in the art, which perform the same function of securing two substrates together. Therefore, because these two fastening means were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the hooks of Nortman for the hooks of Hintz.

Additionally, regarding the depth of the channel, it appears that the depth of the channel is at least equal to the diameter of the midpoint from figure 2, however since it not explicitly stated, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to make the depth of the channel at least equal to the diameter of the midpoint of the column because Applicant has not disclosed that depth of the channel provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a channel having a depth as taught by Hintz or the claimed depth because both depths perform the same function of allowing a user to grasp the handle equally well. Therefore, it would have been

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obvious to one of ordinary skill in the art to modify Hintz to obtain the invention as specified in claim 1.



Claims 1-8, 10, 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Paepke (USPN 5003659) in view of Fay (USPN 2676758) and in view of Nortman et al. (USPN 6276032).

Paepke teaches a cleaning device comprising a cleaning member (figure 4, element 22) with a first surface having a scouring surface of loops material (figure 4, element 20) (claims 1, 7, 8) and a second surface comprising a sponge (figure 4, element 22) (claim 10). There is a base plate (figure 4, element 16) having a plurality of projections (figure 4, element 18) arranged in rows and columns (figure 2) for gripping the first surface of the cleaning member (claims 1 and 6). The base plate comprises an ergonomic, contoured handle member (figure 2, element 12) including a grasping means that is curved throughout and configured to closely conform to the curvature of the inside of a user's hand (claim 1) and the grasping means is integral with the base plate (claim 12). The handle further includes a bottom surface (portion closest to the column)

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and an outermost circumference (widest portion of handle). There is a column (24) for connecting the base plate to the handle. The column has a diameter and an outer surface. The handle has a channel formed between a bottom surface of the handle, the outermost circumference of the handle, the column and the base plate. The channel is configured in such a manner as to accept at least part of a user's finger when the handle is grasped (figure 8, element R) (col. 3, lines 12-19) (claim 1).

Paepke teaches all the essential elements of the claimed invention however fails to teach the exact details of the projections that are used (claims 1-5), for example, that the projection is T-shaped with the top segment having a substantially straight upper surface (claim 1) and the opposing ends of the projections have a free end, and the opposing ends have a cross section that is thicker at the connection of the ends to the top segment than at the free ends (claim 2). Paepke fails to teach that the intermediate section of projections have a bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the intermediate section has a cross section that is thicker at the bottom end than at a top end (claim 3). Paepke also fails to teach the opposing ends terminate at substantially a point (claim 4) and that the distance between the top end and the bottom end of the intermediate segment are substantially the same (claim 5). Additionally, Paepke fails to teach that the handle is separable from the base plate (claim 1) and that the channel has a depth defined by the outermost circumference of the handle and the midpoint of outer edge of the column, the depth being at least equal to the diameter of the midpoint of the column (claim 1).

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Fay teaches a cleaning device comprising a handle (11) and base plate (1). There is a cleaning member (15) attached to the base plate. The handle comprises a channel (13) between the bottom surface of the handle and the base plate. There is a column (12) connecting the handle and the base member. The column allows the handle to be removed from the base plate.

Nortman teaches fastening hooks having a T-shaped projection each with a top segment that is substantially straight (figure 5, element 60). The projections have a lower surface and opposing ends (figure 5, element 77) and an intermediate section (figure 5, element 58) separating the top segment from the base plate by a predefined distance. The opposing ends of the projections each have free ends, which terminate at *substantially* a point (figure 5), and therefore the opposing ends have a cross section that is thicker at the connection of said ends to the top segment than at said free ends (figure 5). The intermediate section having bottom end defined by the connection of the intermediate section to the base plate and a top end defined by the connection of the intermediate section to the top segment, wherein the cross section is thicker at the bottom end than at the top end (figure 5). The distance between the end of each free end is *substantially* the same as the distance between the top end and the bottom end of the intermediate segment (figure 5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Paepke so that the handle is detachable from the base plate as taught by Fay since making integral parts separable is an example of a modification that has been considered to be within the level of ordinary skill in the art to follow. *In re Dulberg* 129 USPQ 348, 349. Additionally, it would have been obvious to use the hooks as taught by Nortman as the fastening means on Paepke since the hooks of Nortman can exhibit substantially equal fastening properties

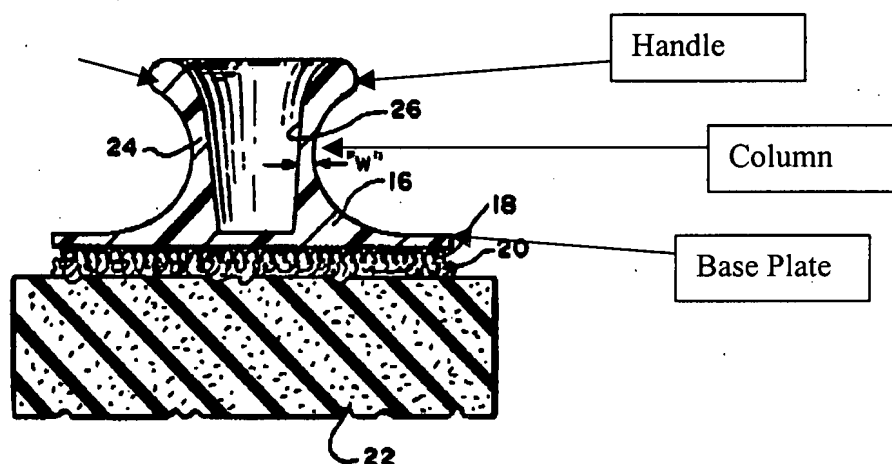
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in substantially all directions that are parallel to a plane that is generally established by the substrate layer of the fastener component (col. 21, lines 51-55). Also, the fasteners of Nortman have increased loop-engaging and loop-retaining characteristics which leads to greater resistance to premature pop-opens (col. 6, lines 54-58). Additionally, the hooks as taught by Paepke and the hooks as taught by Nortman are equivalent structures known in the art, which perform the same function of securing two substrates together. Therefore, because these two fastening means were art-recognized equivalents at the time the invention was made, one of ordinary skill in the art would have found it obvious to substitute the hooks of Nortman for the hooks of Paepke.

Additionally, regarding the depth of the channel, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to make the depth of the channel at least equal to the diameter of the midpoint of the column because Applicant has not disclosed that depth of the channel provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a channel having a depth as taught by Paepke or the claimed depth because both depths perform the same function of allowing a user to grasp the handle equally well. Therefore, it would have been obvious to one of ordinary skill in the art to modify Paepke to obtain the invention as specified in claim 1.

Outermost circumference
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Claims 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham in view of Nortman and further in view of Garcia (USPN 5419015) or Hintz et al. in view of Nortman and further in view of Garcia (USPN 5419015) or Paepke in view of Fay and Nortman in further view of Garcia (USPN 5419015).

Graham in view of Nortman or Hintz in view of Nortman or Paepke in view of Fay and Nortman all teach all the essential elements of the claimed invention including a handle member includes a grasping means that is curved throughout and configured to closely conform to the curvature of the inside of a user's hand and the grasping means is integral with the base plate (claim 11). The references however fail to teach a cleaning member with a third surface comprising a scouring pad (claim 9). Garcia teaches a cleaning member that comprises a first surface of loop material (figure 8, element 32), a second surface of sponge material (figure 8, element 33) and a third surface of an abrasive material such as a scouring pad (figure 8, element 34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a scouring pad to the sponge surface of Graham in view of Nortman or Hintz in view of Nortman or Paepke in view of Fay and Nortman's cleaning member as taught by Garcia so as to increase the cleaning capabilities and versatility of the device.

***Response to Arguments***

It is noted that the applicant's argument regarding the 112 1<sup>st</sup> and 112 2<sup>nd</sup> rejection are persuasive and have been withdrawn. It is clear from figure 4 that the limitations added to the claims and the specification are fully supported in the drawings.

Applicant's arguments filed 7/23/07 have been fully considered but they are not persuasive.

The applicant argues that Graham, Nortman, Paepke, Fay, Garcia and Hintz do not disclose a channel that has a depth defined by the outermost circumference of the handle and the outer edge of the column, wherein the depth is at least equal to the diameter of the column. The base references of Graham, Paepke, and Hintz all teach a channel between the outermost circumference of the handle and the outer edge of the column. As for the depth of the channel, the applicant has not disclosed that depth of the channel provides an advantage, is used for a particular purpose, or solves a stated problem. Therefore, lacking this, it would have been obvious to modify the base references with the claimed channel depth to achieve the present invention.

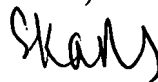
***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 7:00-4:30 M-Th, alternating F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Shay L Karls  
Patent Examiner  
Art Unit 1744